



**UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/900,436	07/25/97	KUBAYASHI	Y YAMAPU503US

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MM51/0602

EXAMINER
JEANPIERRE, P

ART UNIT	PAPER NUMBER
2819	#5

DATE MAILED: 06/02/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/900,436

Applicant(s)
Kobayashi et al.

Examiner
Peguy JeanPierre

Group Art Unit
2819



☒ Responsive to communication(s) filed on Jul 25, 1997

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-36 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-3, 6-10, and 13-36 is/are rejected.

☒ Claim(s) 4, 5, 11, and 12 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on Jul 25, 1997 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4/1page

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

2. The drawings are objected to because Figures 18-24b must be labeled "Prior Art".

Correction is required.

3. The information disclosure statement filed 11/3/97 has been considered.

4. The abstract of the disclosure is objected to because it repeats information given in the claims. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The specification is objected to because the material starting from the beginning of page 19 and ending in the middle of page 31 seems to be a verbatim repetition of claims 1-36.

There is no need to repeat that which can be found elsewhere in its entirety. The purpose of the brief summary of the invention is to apprise the public, and more especially those interested in the particular art to which the invention relates, of the nature of the invention; see MPEP 608.01(d).

Appropriate correction is required.

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-3, 6-10, 13-22, 29, 31, 33, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (Figures 18-27) in view of Sinjou et al. (USP 4,603,413).

Figure 18 of the admitted prior art discloses a scrambling means which scrambles the main data in accordance with a pseudo sequence random number sequence. The output of the scrambler is inputted to a modulator (102) which performs a pit position modulation and a pulse width modulation (see page 5, lines 14-22). The scrambled data is set based on the random numbers. It is sequentially selected on the basis of the sector and the data included in one sector depends on the sector initial values of the pseudo random number sequence. The step of modulating the scrambled main data unit is performed by a first modulation of M types and

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second modulation of N out of the M types modulation (see page 17, lines 29-33). Prior art Figure 20 further discloses a first and a second digital sum variation (DSV) circuits which obtain the difference between the number of (0) bits and the number of (1) bits included in the output main data unit (see page 13 line 25 to page 14 line 12) on a sector basis (page 14, lines 14-17 and page 18 lines 26-29). Figure 20 further discloses means (122, 123) for storing main data unit, a selector (125) which selects a predetermined DSV value, a comparator (130) which determines the range of the obtained DSV. The prior art does not teach the selection of another pseudo random number sequence which depends upon a predetermined threshold; a re-scrambling step.

Sinjou et al. disclose in Figure 1 and column 8 lines 57 these limitations. The system of Sinjou et al. comprises a modulator (2) which is connected to a detector (11). The detector detects outputs a DSV control signal on line 12 to a switch (7). If the DSV control signal is conformed to a predetermined criterion the information signal is outputted at (8), if not it is re-scrambled through (5). This is known in the art to minimize low frequency components present in the modulated signal. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate in the prior art figures (18-27) the limitations of rescrambling the input data according to a predetermined criterion to improve the accuracy of recording/reproducing apparatuses.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

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(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9. Claims 23-28; 30, 32, 34, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by The admitted Prior Art (Figures 18-19).

Figure 18 of the admitted prior art discloses a scrambling means which scrambles the main data in accordance with a pseudo sequence random number sequence. The scrambled data is set based on the random numbers. It is sequentially selected on the basis of the sector and the data included in one sector depends on the sector initial values of the pseudo random number sequence (sector start signal). The scrambling is performed by obtaining a logical operation (Fig. 19, exclusive -OR) of the main data and the data generated from the maximum length sequence (see page 4; lines 2-19 and page 16, lines 14-19, Fig. 19).

10. Claims 4-5, 11-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Matsui (USP 5,661,707) discloses a method and apparatus for recording an information signal with scrambling. Moriyama (USP 5,151,699) discloses a high density data converting apparatus. Satomura (USP 5,451,943) discloses a data recording method and apparatus using a digital sum value of the coded signal.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peguy JeanPierre whose telephone number is (703) 308-1968. Any inquiry of a general nature or related to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1782.

PIP
PJP

June 2, 1998



HOWARD L. WILLIAMS
PRIMARY EXAMINER
GROUP 210